BUREAU OF LAND MANAGEMENT
ELKO FIELD OFFICE
BURNED AREA EMERGENCY REHABILITATION AND STABILIZATION TEAM

August 2001 Fire Complex

CULTURAL RESOURCE ASSESSMENT

I. OBJECTIVES

- Identify cultural resources damaged by fire suppression activities.
- Identify cultural resources that could be impacted by linear and block-area BAER projects to plan for avoidance or other mitigation.
- Evaluate National Register of Historic Places (NRHP) eligibility of identified sites, including subsurface testing of damaged sites, if the eligibility status is not otherwise apparent.
- Stabilize or otherwise provide treatments for National Register-eligible damaged sites.
- Keep the Western Shoshone tribal governments informed of fire rehabilitation projects as well as cultural resource damage assessments that may affect Traditional Cultural Properties (TCP) or other Shoshone heritage sites.
- Meet all legal reporting requirements for Section 106 of the National Historical Preservation Act (NHPA) and the Nevada State Protocol that exists between the BLM and the Nevada State Historic Preservation Office (SHPO).

II. ISSUES

- Occurrence of prehistoric and historic archaeological resources, historic structures, and historic landscapes within the burned area and fire suppression area;
- Potential for impacts to cultural properties consequent to the wildlife, fire suppression and rehabilitation activities;
- Reducing effects of erosion upon cultural resources;
- Assessment of fire and fire suppression effects on previously documented cultural resources, as well as those identified during the ground disturbance inventories associated with the August 2001 Fire Complex;
- Consultation about and protection of sacred/respected places within the burn

areas;

- Recommendation of appropriate evaluation, monitoring, or preservation treatments for cultural resources affected by fire, suppression, or rehabilitation activities; and

- Avoidance or mitigation of adverse effects to cultural resources from suppression and rehabilitation activities.

III. ARCHAEOLOGICAL & HISTORICAL BACKGROUND

History is the cumulative records of humans over the past 12,000 years, as represented by their material remains upon the landscape. More complete summaries of the history and prehistory of the Elko district can be found in James (1981) and Elston and Budy (1990). The following information is intended to be a cursory overview of present knowledge, and is not presented as a comprehensive summary. The purpose of this background information is to provide a framework within which the fire, suppression activity, post-suppression inventory, and recommended cultural resource prescriptions may be considered in context.

The August 2001 Fire Complex occurred within an area known to archaeologists as the Central Great Basin, which is characterized by long, north-south trending mountain ranges and valleys known to have been inhabited by humans for approximately 12,000 years. Valley floors are over 5,000 feet in elevation, and mountains tend to be as much as 10,000 feet above sea level. Some valleys were filled with lakes during the Pleistocene. These lakes reached their deepest levels between 18,000 and 15,000 years ago (before present or BP), shrinking to lower levels by 11,000 years ago. A reduction in effective precipitation after ca. 15,000 BP dried these lakes by about 10,000 BP. This latter date also marks the final extinction for many megafauna such as horses, camels, mastodons, sloths, and mammoths. Temperatures continued to climb and peaked between 8,300 and 7,000 BP. During this time period, pinyon pine and Utah juniper migrated into the central and northern Great Basin. A return to cooler and moister climatic conditions created many marshes in the valley floors of the Great Basin between 4000 and 2000 BP. After this time, the climate has been much like it is today, with relatively short periods of drought and high precipitation during specific intervals.

The Central Great Basin was occupied by Western Shoshone at the time of first Euro-American contact by Jedediah Smith in 1827-30. Peter Ogden also traveled through the northern Great Basin at about the same time (1829-30). The Humboldt River Valley was traveled along by the Bonneville-Walker party in 1830-31. Further contacts occurred between fur trappers, mountain men, settlers, and Shoshone during the 1830-40s. With the discovery of gold in California in the 1840s, hundreds of thousands of emigrants passed through the region as part of wagon trains on their way to California. Today this route, known as the California Emigrant Trail, is part of the National Trail System.

The prehistory of the Elko District prior to Euroamerican contact with Western Shoshone is
documented through archaeological research. The Central Great Basin has been occupied by humans for over 10,000 years. The early inhabitants moved frequently throughout the year to procure wild foods and other natural resources, and to interact and form alliances with various other peoples. Human activities have created thousands of cultural resource sites across the landscape. The dry climate and very low development of the land tends to preserve these sites to a much greater extent than in other parts of the country.

While arguements concerning archaeology, linguistics, territoriality, land use, ethnicity, and demography are of significant interest and sources for research, the objectives of this assessment are not served by documenting these debates. It is important to note that the Great Basin continues to serve as an important region for the investigation of human adaptations, environmental change, and how humans alter and respond to their environments. Thus, the mandate of this assessment is to ensure that cultural resources that can provide significant information towards addressing these research goals, which were damaged by the suppression of fires or the related rehabilitation efforts, be properly identified and evaluated.

The operating principle of heritage protection and conservation is that the survival of intact elements of the human record upon this erosive landscape is significant, and these resources must be protected to comply with various federal laws and regulations. With the added tolls of agricultural, residential, and industrial developments, each non-renewable and intact archaeological site surviving assumes increasing important to science, people, and our education.

Table CR. 1 August 2001 Fire Complex Cultural Resources Advisors & Consultations

Name:	Home Office:	Work Period:
Eric Dillingham	BLM Elko Field Office	Throughout fire season
Timothy W. Murphy	BLM Elko Field Office	Throughout fire season
Bryan Hockett	BLM Elko Field Office	Throughout fire season
Bill Fawcett	BLM Elko Field Office	Since July 15, 2001
Teresa Panter	BLM Elko Field Office	Throughout fire season
Michelle Wiseman	BLM Elko Field Office	Throughout fire season
Shawn Gibson	BLM Elko Field Office	Throughout fire season

IV. RECONNAISSANCE METHODOLOGY

Protection of human life and property from wildfire takes precedence over the protection of cultural properties. Archaeological sites and cultural properties within fires must be afforded protection whenever possible. Section 106 of the NHPA mandates that the federal government would account for cultural projects in its projects and undertakings, including fire suppression and rehabilitation efforts.

Lightning during a third, consecutive, dry summer caused clusters of fires throughout the Elko area in August, 2001. Fire suppression resources were further thinned at that time due to fires also occurring in California and northwestern Nevada. Bulldozer-bladed fire lines were used to limit fire growth in threatened and endangered species habitat (e.g., sage grouse) or areas involving private property. Staff and term archaeologists were able to work with extended attack (type II and III) teams to limit damage to known cultural resources such as the California National Historic Trail. In most cases, the extreme fire behavior during the August fires and limited fire experience of the majority of archaeologists precluded walking in front of bulldozers on active flame fronts. Inventory of these bulldozer fire lines was begun during and immediately after fire suppression.

Although the initial fire suppression efforts were conducted without specific emphasis on the protection of cultural resources as a primary objective, attempts were made to monitor suppression activities and protect potential cultural properties from damage. However, the small proportion of existing cultural resources survey coverage, combined with the sheer size of the fires involved, prevented much intervention by the limited archaeological staff available for this effort.

Inventories were subsequently undertaken for selected bulldozer and hand-line rehabilitations.

Archaeologists also cooperated with other resource specialists (operations, wildlife, range, hydrology, geology, vegetation, forestry, and fire) to preclude inadvertent damage to cultural properties resulting from BAER-initiated or assisted cleanup. Hence, cultural resources protection was and continues to be a high priority during BAER activities and tasks.

Cultural resources located by BAER personnel are discussed in the findings section (below). None of the identified historic or prehistoric sites was formally recorded in order to maximize inventory coverage of bulldozer lines and other impacted areas, providing more information needed for this assessment. More detailed and formal recording of these sites will be completed as part of the proposed work.

The guiding principle, as well as the legal requirement of fire rehabilitation, is to regard archaeological sites or other fragile cultural resources as watershed elements. If post-fire erosion or other potential watershed problems threaten cultural resources then those resources must receive special attention to insure that their unique and irreplaceable values are given full consideration.

Damages to cultural resources within the August 2001 Fire Complex can be grouped into two broad categories: fire-related, and suppression-related. Fire-related impacts include thermal fracture and discoloration of stone artifacts and rock art, destruction of organic remains (e.g., wood, bone, shell, fiber, hide, paint, middens), de-stabilization of site deposits or landscapes (increasing wind and water erosion), and increased susceptibility to looting and artifact collection due to greater visibility. Suppression-related impacts come from disturbance or destruction from bulldozer or hand line construction, use of

sites for fire camp or staging, and initial rehabilitation activities, including restoration of dozer and hand lines.

V. FINDINGS

The August 2001 Fire Complex cultural resource assessment addresses 13 fires, encompassing approximately 259,165 acres, the perimeters of which contain at least a thousand archaeological sites or cultural resources. These sites range from historic sites such as aspen carvings, the California National Historic Trail and mining-related places, to more ancient, scatters of stone tools and cultural features–the remains of places where Native Americans camped and/or procured and processed various resources. Two known TCPs are close to the fire area; and both properties are eligible to the NRHP.

Methods for locating sites include both in-office literature and map review of previous inventories, review of government land office records, and cultural resource inventory of bulldozed fireline at the fire locations. Archaeologists have checked the majority of firelines on the Stag, North Delano, Tabor Creek, and Rodeo fires. However, even on these fires, there may be small segments of unsurveyed line. Archaeologists have examined only small portions of fireline in the remaining fires.

In the sections below, the types and relative sensitivities or densities of cultural resources are summarized for each fire, along with information about the size and nature of the fire-related impacts. These estimates about the numbers and types of cultural resources must remain general pending cultural resource inventory in advance of rehabilitation projects.

During inventory of firelines, it may become apparent that damage has occurred to cultural resources as a result of fire suppression. These could require mitigation. While the BLM's fire suppression program often funds these, documentation of plans for mitigating damaged sites can be best managed through the BAER plan and its amendments.

Bailey X-297

The Bailey fire burned in the foothills of upper Pine Valley to the south of Carlin, Nevada during mid-August, 2001. Part of the Sadler Complex rehabilitation aerial seedings were burned. Most of the fire was within sagebrush, rabbitbrush and various grass communities between 5200 and 6000' in elevation. Over 432 acres of public (BLM) rangeland and 769 private acres burned during the Bailey fire, including the Indian Springs and Pine Mountain grazing allotments. Portions of the floodplain along Trout Creek also burned, but no structures. Most of the public lands involved in this fire are around the perimeter or outer edge.

Approximately 150 acres of the BLM public lands will be rehabilitated through drill seeding. In addition, approximately 3.7 miles of dozer line and 6 miles of road will also be regraded. Approximately 2.7 miles of new permanent fences and 1 mile of existing

fence will be reconstructed.

Three cultural resources inventories have previously been completed within the Bailey Fire (Armentrout 1978b, Price 1988, Zerga 1994). No sites were located within the approximately 150 acres surveyed during these projects. Even though Trout Creek runs along the northern edge of the fire, the overall density of cultural resources in the area appears to be relatively low. No historic sites are shown on the GLO maps.

BLM archaeologists examined some of the bulldozed fire lines and other portions of the fire. They only located two historic debris or trash scatters within the fire. Given the low density of sites, along with these findings, relatively little additional field work will be recommended as part of rehabilitation.

Cultural resources should be inventoried on 11.5 linear miles of dozer-lines, fences and roads, and 150 acres of drill seeding prior to rehabilitation. Any cultural resources located in these or other earlier inventories within the Bailey Fire need to be avoided during rehabilitation activities.

Buffalo X-286

The Buffalo Fire burned about 21,188 acres, most of which (16,639 acres) lies on public lands administered by the BLM. The fire burned riparian willows, aspen and other vegetation along 6 miles of Frazer Creek. The remaining area within the fire was covered with sagebrush and various grasses.

Fire suppression created 43 miles of dozer lines. The fire damaged approximately 4.4 miles of fences, and 20 miles of new fences are planned.

Prior to the Buffalo Fire, six cultural resource inventories had already been completed, involving the intensive survey of 60 acres and recording of five sites, mostly lithic scatters but also including a rockshelter (Armentrout 1980, Foulkes 1984a, Peterson 1977a, 1977b; Spencer 1985, Witter 1980a). Some of the lithic scatters are very large with hundreds of chipped-stone artifacts exposed on the ground surface. Site CrNv-12-3784–a Late Archaic large (>100,000 sq.m.) lithic scatter appears to be located on a fence that burned within the Buffalo Fire. Three small lithic scatters of unknown age (CrNv-12-4109, -4120, 4121) also appear to be located within the fire. Another lithic scatter (CrNv-12-4122) is much larger (75,000 sq.m.) and may have been impacted by a bulldozer fire line. All of these sites have been documented on IMACS forms, but the quality of the existing data are too poor and incomplete to evaluate eligibility to the NRHP. The existing surveys indicate that prehistoric site densities are very high (> 50 sites/sq.mi.) in the vicinity of springs.

Since fire suppression approximately a third (ca. 14 miles) of bulldozer fire lines have been examined by BLM archaeologists. In the Midas Mining District, one historic mining site was impacted by a dozer line. A tin can was observed near the dozer line. Elsewhere,

the dozer lines crossed two lithic scatters with more than 100 flakes and several bifaces at each site.

The remaining 29 miles of dozer lines, safety area, roads repairs, and 23 miles of new fences would be surveyed prior to rehabilitation. No drill seedings are currently planned. The impacts to the lithic scatters and mining sites (mentioned above) should be assessed and the poor quality documentation be improved through revisits that include detailed IMACS recording, including evaluation for National Register eligibility.

Coyote X-284

The Coyote Fire burned approximately 11,675 acres during mid-August, 2001. About half (7829 acres) of this area was on lands managed by the BLM. Riparian aspen and willows burned along Beaver Creek and its tributaries. Sagebrush and various grasses cover the remaining areas now burned by the Coyote Fire. Soils within the fire have a high potential for water erosion, and a lower probability of wind erosion.

BLM archaeologists examined nearly all of the 8.5 miles of bulldozer lines created during fire suppression. At the north end of the fire, they located a small prehistoric site with bulldozer damage along one margin. Aspen carvings also were observed in the vicinity. Aspen groves that survived the fire still require survey and documentation. Some of these sites may be on private land, but they were impacted by fire suppression and could be affected by rehabilitation.

The sites located along the bulldozer fire lines and the aspen groves both need detailed documentation and assessment of eligibility for the NRHP. There is not any proposed new permanent or temporary fences for the Coyote Fire. Additionally, there is not any planned road maintenance.

Dee Gold X 283

The Dee Gold Fire burned 316 acres–all on BLM administered public lands. Sagebrush and grasses grow on the lands burned by the Dee Gold Fire.

Fire suppression required the construction of 2.0 miles of dozer lines, mostly on the eastern edge of the fire. The fire also damaged about 0.1 miles of fence lines in the northwestern part of the fire. 4 miles of roads appear to require rehabilitation due to this fire. No drill seedings are planned within the Dee Gold Fire.

The entire area in and around the Dee Gold Fire has been previously intensively inventoried for cultural resources (Billat 1991, Johnson 1991, Tipps and Popek 1992). The large site (CrNV-12-7202) originally recorded by Johnson (1991) that covered the southern half of the Fire, was subsequently divided into many smaller sites by Tipps and Popek (1992). Together, these surveys recorded 8 isolated finds (mostly chipped-stone flakes), ten small (<4300 sq.m.) chipped-stone scatters, three large (11,500-32,000 sq.m.) chipped-stone scatters, and two large (3300-111,900 sq.m.) chipped- and ground-stone

scatters. Natural cobbles of Tosawihi chert occur at several of these sites. Many of the stone artifacts were flaked from materials derived from this source.

Four of the previously recorded sites are eligible for the NRHP: CrNV-12-10449–an Archaic and Late Prehistoric small chipped-stone scatter at the edge of the Fire, CrNV-12-10462–an Early Archaic small chipped- and ground-stone scatter in the Fire, CrNV-12-10465--a small Protohistoric chipped-stone scatter with source material also in the Fire, and CrNV-12-10484–a vast chipped- and ground-stone scatter with source material that dates from Paleoindian/Paleoarchaic, Archaic, and Late Prehistoric times, and was impacted by dozer lines and a road. Two other ineligible sites occur along the eastern edge of the Fire. Another four ineligible sites were near or in the dozer lines. Four ineligible sites appear to be located within the Fire. Post-fire inspection revealed that site 10449 was damaged when a road was bladed for a fire line. Site 10462 was driven through by fire engines during suppression. Eligible sites 10449 and 10462 were marked in the field and avoided with a 50-100' buffer during fire suppression.

The sites listed above should be revisited to update their documentation and assess any additional damages. Great care should be taken to avoid these sites during rehabilitation activities, including road repairs, fence construction and maintenance, and dozer line grading and seeding.

North Delano X-257

In early August, the North Delano fire burned about 8,827 acres of BLM-administered public lands to the northeast of Wells, Nevada. Lightning also cause this fire that burned many acres of sagebrush-grasslands and juniper woodlands.

Fire suppression involved the creation of about 27 miles of bulldozer lines. Approximately 6.3 miles of fence line were destroyed by the fire. A total of about 26 miles of roads were also impacted, some of which has already been repaired. Five safety zones were constructed, and four of them require additional rehabilitation.

The only previous cultural resources inventory in the area (Murphy 1981) did not locate any sites within the present fire, but small, lithic scatters are common throughout the vicinity. During fire suppression the dozer bosses were briefed about cultural resources prior to dozer use. BLM archaeologists worked with them to identify cultural resources. Dozer lines did cross several small lithic scatters. No significant or eligible sites were impacted by dozer use, but fire severity was relatively high.

BLM archaeologists have examined the bulldozer lines and located numerous small lithic scatters. The largest of those sites has about 30 flakes exposed on the surface, while most sites have about 10 flakes visible on the ground surface. Only 1 biface or other formal tools was observed, and source materials appear also to be absent. Some of the artifact were made from obsidian, but most are of various cherts. Several of the sites were bisected and damaged by the bulldozer lines, but none of them are believed to be eligible

for the NRHP.

Although no significant or eligible sites have yet been located within the small proportion of the North Delano Fire examined by archaeologists, the density of small, lithic scatters is very high. The 596 acres proposed for drill seeding and the 7.5 miles of new fences should be intensively inventoried prior to rehabilitation. All sites located during these inventories should be flagged and avoided during rehabilitation activities.

Dunphy X-282

The Dunphy Fire burned on the north side of Interstate-80, about 30 miles west of Carlin, Nevada. Most of this fire was on private lands (9061 acres), and only a small fraction on public lands (661 acres). Much of the Dunphy Fire area was covered with sagebrush and various grasses. Soils are highly erodible by water, but only slightly by wind.

This fire burned into the Bob Flat Fire included in the Elko 14 Fire Rehabilitation Plan. NDOW plans to reseed the private lands. Dozer lines will be recontoured and reseeded.

Eighty acres of public land intensively surveyed by BLM archaeologists in August, 2001 without finding any cultural resources except for some post-1950 trash. This site is not eligible for the NRHP because it is not clearly associated with a specific historic theme. No evidence of intact portions of the California Trail within the public lands.

No additional cultural resources inventory will be required since BLM archaeologists have already intensively inventoried the public lands-portion of this fire. The trash dump, like other cultural resources, should be avoided during rehabilitation activities.

Hot Lake X-305

In mid-August, 2001 the Hot Lake Fire burned about 70,910 acres, including 68,332 acres of BLM administered public lands. This fire extends across a high ridge across the valley to the south of the Buffalo Fire, and burned areas covered with sagebrush and various grasses. Without this cover, the soils are highly susceptible to erosion.

Fire suppression involved the blading of 57 miles of bulldozer fire lines. 11.2 miles of fences and 26 miles of roads were also damaged by the fire or suppression. 9.7 miles of new fence, as well as 1.5 miles of temporary fence are planned as part of rehabilitation activities.

Over 40 cultural resources surveys have already been completed within the Hot Lake Fire area, locating several hundred archaeological sites and intensively surveying several thousand acres (Armentourt 1978a, Armentrout and Armentrout 1978, Botkin 1991a, 1991b, 1992; Carambelas 1991, Drews 1988, Elston and Raven 1992, Elston et al. 1987, Foulkes 1984b, Jaynes 1982, 1985; Leach and Botkins 1991, Raven 1988, Scott 1994, Stoner and Peterson 1990, Weinberg 1999, Witter 1980b). The Hot Lake Fire includes portions the Tosawihi Quarries archaeological district (26Ek6624) and the Tosawihi Quarries Traditional Cultural Property (TCP). The archaeological district includes several

hundred chipped-stone scatters, quarry pits, and rockshelters near the eastern edge of the fire (Botkin 1991b, 1992; Elston and Raven 1992, Elston et al. 1987; Leach and Botkins 1991, Raven 1988, Rusco and Raven 1992, Stoner and Peterson 1990). The National Register eligible Traditional Cultural Property has sensitive and confidential information that is important to the Western Shoshone. Members of the Western Shoshone continue to use the Traditional Cultural Property for healing, education, and tribal traditions.

The fire burned portions of the Ivanhoe Mining District, where mercury was mined from 1915 to the early 1970's, uranium explored in 1980, ands gold mined from 1979 to the present. This district includes mine workings and equipment. Only foundations of buildings at the Rock Creek Ranch remain following an earlier fire. Historic stage roads between Midas and surrounding communities may also have been impacted.

The western half of the Hot Lake Fire was previously examined as part of a sample (Class II) inventory of the Rock Creek Burn Rehabilitation (Jaynes 1985). This survey indicates that archaeological sites also occur at relatively high densities in the western portion of the Fire.

During fire suppression no dozer or hand lines were constructed within the Tosawihi Quarries or TCP. No fire retardant was dropped in the Quarries or TCP.

Following fire suppression, BLM archaeologists examined several miles of bulldozer fire lines around the Hot Lake Fire. While damage to the Tosawihi Quarries and TCP may have been minimal, numerous sites in the surrounding area, along the fire lines were impacted.

Cultural resource along 94 linear-miles of roads, fences and dozer lines would be inventoried prior to their rehabilitation. Great care must be taken to avoid the Tosawihi Quarries (26Ek6624) and TCP, and mining sites associated with Ivanhoe Mining District during rehabilitation. The BLM plans to consult with Native American prior to any rehabilitation or further inventories at the Hot Lake Fire.

Ranch Fire K-857

Approximately 18,966 acres burned in the Ranch Fire near Jakes Creek, including portions of the Hammond and Ellison ranches, and their grazing allotments on public lands. About 12,422 acres of this fire are on public lands administered by the BLM. The area varied from extremely steep terrain on the east to more level lower elevations on the western two thirds. Soils are highly water erodable, but only slightly erodable by wind. Riparian areas along Jakes Creek also burned, including aspen and willows.

Fire suppression created 15.9 miles of dozer lines. A proposed 6,671 acres within this fire will be drill seeded. 16.2 miles of new fence is planned.

An intensive cultural resources inventory was previously completed for the Kelly Creek fence line project, within and adjacent to the Ranch Fire. The known sites include small,

chipped stone scatters and historic can and bottle scatters. Isolated finds of flakes, cores, and bifaces also occur.

The BLM Winnemucca Field Office provided some additional site records from the areas around the Ranch Fire. Montgomery (1996) reported on an intensive linear inventory that extends along the east edge of the fire, adjacent to a road (used to create fire-break). The seven sites (CrNV 21-6456, 6457, 6458, 6459, 6460, 6461, 6469) in this portion of his inventory are all small scatters of chipped-stone artifacts except for one site (CrNv 21-6460) that is much (30,000 sq.m.) larger and dates to the Archaic. Site CrNV 21-6460 is eligible for the NRHP. None of these sites were impacted during the suppression of the Ranch Fire.

The density of cultural resources within the fire appears to be relatively low except in the vicinity of drainages and springs. They consist almost entirely of small scatters of chipped-stone artifacts. Intensive cultural resources surveys should be completed in advance of rehabilitation, including new fences, road repairs, 9 miles of dozer lines, and 4480 acres of drill-seeding. The sites listed above should be revisited to assess any damage to them from fire suppression. They should also be avoided during rehabilitation.

Rodeo Creek X-272

The Rodeo Creek Fire occurred in early August to the north of Dunphy, Nevada. Approximately 2,707 acres of this 5,529 acre fire involved public (BLM) lands. This fire burned sagebrush and various grasses with moderate to high intensity. With the removal of plant cover, the soils are being wind-eroded. No riparian zones were within this fire.

No dozer lines were created while fighting this fire, but 0.5 miles of hand lines were constructed.

The proposed rehabilitation will involve rebuilding 5 linear-miles of fences, 4 linear-miles of roads, and drill seeding 492 acres in the lower-elevations within the fire.

No cultural resources are known to have been impacted by this fire, although a cave is also known from the area. The cave sites needs additional documentation and evaluation. The areas proposed for rehabilitation (i.e., 5.2 miles of new fences, 4.5 miles of roads repairs and hand lines and 492 acres of drill seeding) should be intensively surveyed or inventoried for cultural resources. The located sites can then be avoided during rehabilitation.

Sheep X-275

Approximately 83,670 acres burned in this very large fire during early August, including 41,822 acres of public lands in Lander County. Bulldozers were used during fire suppression to construct 29.3 miles of fire lines, in some cases widening existing roads. Erosion potential of the soils within the fire are slight to moderate.

BLM archaeologists have examined some of the bulldozed firelines. Archaeologists

located one bulldozed-damaged prehistoric archaeological site. This site is very likely eligible to the National Register of Historic Places. A National Register-eligible Traditional Cultural Property (TCP)is located east of the fire area. Access to the TCP was temporarily limited during the fire but the TCP is apparently otherwise unaffected.

A historic well site was also observed that may be associated with the California National Historic Trail, and if so would be eligible to the NRHP. Previously hidden from view, the well is now visible from a well-traveled road and is an object of curiosity. It may become destabilized.

The remaining dozer-lines, 3 miles of new fence, and 4,285 acres of drill seeding should be intensively surveyed prior to rehabilitation. Additionally, the damaged prehistoric site and well site need formal recordation and NRHP-evaluation. Based on the results of the recordation and evaluation, the BLM will plan for their mitigation and stabilization. The BLM continues to consult with the Western Shoshone on the Rock Creek TCP regarding any effects as a result of the fire as well as other matters.

Stag X-246

In early August, 2001, a much larger area (ca. 19,579 acres) burned in the Stag Fire, impacting some cultural resources on the 19,349 acres of BLM administered public lands. Riparian zones along Indian Creek, Hands Creek, Stag Creek, and Conner Creek burned. The remaining areas within the fire were vegetated with sagebrush and various grasses. The fire burned at relatively low intensity. Erosion potential of the soils is slight to moderate within the fire. The Stag Fire is adjacent to the Isolation Fire (discussed in the first 2001 BAER Plan for BLM-Elko Field Office). 21 miles of new fence and 5.4 miles of temporary fence is proposed.

Few cultural resource inventories have been completed prior to this fire. BLM archaeologists have examined most of the 26.5 miles of bulldozer lines. Cultural resources requiring additional documentation and assessment include a homestead/ranch complex, aspen carvings, and small lithic scatters. All of these sites require additional documentation and assessment, and were variously impacted. Intensive inventory of the proposed 593 acres of drill seeding and 28 miles of road repairs need to be accomplished prior to rehabilitation.

Portions of the old stage road that linked Charleston to Deeth may have been impacted. Most of this road is under the present County road, but some isolated segments are believed to remain. They could be subject to erosion, now that the fire has removed the ground cover. This road needs to be inventoried to assess its condition and to document the intact portions, so that they may be avoided during rehabilitation.

Tabor Creek X-231

Approximately 7,004 acres burned in the Tabor Creek Fire. BLM archaeologists have examined some of the 11.1 miles of bulldozer lines. Archaeologists have found or received information on two prehistoric sites and one historic archaeological site. One

site may be more sensitive, and require additional in-field evaluation. A railroad siding with a box-car was protected from the fire, but also needs further documentation and evaluation. Further survey would be required in the northeast area of the fire as well. 6 miles of new fence is proposed.

Mile Marker 367 X-256

This lightning-caused fire burned about 578 acres to the south of Interstate-80 in the Pequop Mountains and Independence Valley, about 15 miles west of Wells. Vegetation cover varies from pinyon-juniper and aspen communities at higher elevations to sagebrush and grass, with scattered trees or shrubs in lower elevations. Most of the fire was within the pinyon-juniper community. The fire occurred during early August, 2001 with moderate to high intensity.
Most of the Mile Marker 367 fire burned on public lands (575 acres) within the Big Springs allotment. Approximately 5 miles of access roads were impacted and altered during fire suppression.

No cultural resources or previous surveys/inventories are shown in the BLM Elko Field Office records. However, fire-crews reported the existence of some lithic scatters along the ridge crest, near the east end of the fire.

Prior to rehabilitation activities, archaeologists should locate and record those lithic scatters. The 50 acres proposed for planting in pinyon and shubs and the areas along the access roads proposed for tree pruning (ca. 12 acres) should also be intensively inventoried for additional cultural resources. Any cultural resources must be avoided during rehabilitation, or a mitigation (data recovery) plan must be developed to address the unavoidable impacts.

VI. RECOMMENDATIONS

Areas impacted by fire suppression (i.e., dozer lines, roads) and designated for mechanical seeding and other ground disturbance would be inventoried for cultural resources before rehabilitation occurs in accordance with the State Protocol Agreement between BLM Nevada and the Nevada SHPO. The goal of these cultural resources inventories would be to document the damage done to sites, record additional cultural resources, and evaluate the eligibility of sites for the NRHP. Cultural resources located in these and earlier inventories would be avoided during rehabilitation efforts. Mitigation needs for suppression-damaged cultural resources is only partially known at this time. As more information is known, newly recorded archaeological sites may need testing or data recovery. Funding for these efforts may come from BLM's fire suppression program. Local Native Americans would be consulted as appropriate prior to any ground disturbing activities such as drill seeding and prior to any herbicide treatment. If traditional cultural properties (TCP) or other areas having traditional or religious significance to Native Americans are discovered as a result of this consultation, the BLM will insure that measures are taken to avoid or reduce impacts to these areas of concern to Native

Americans.

A. Management (Specification Related)

Specifications were prepared to address known and potential effects to cultural resources. Some of them address specific sites or localities, while others are concerned with inventories of bulldozer lines, reseedings, and rehabilitation efforts. It is recommended that the larger (>2000 acres) inventories be accomplished by contract. Contracts must either address specific rehabilitation or mitigation needs for properties damaged by fire suppression activities, or be written to initiate a large-scale effort to inventory previously-uninventoried areas for potential cultural resources disturbed by previous, or in advance of, further ground-disturbing activity.

As part of inventory, each cultural property must be evaluated for potential eligibility to the NRHP. Only properties eligible to the National Register may be considered as significant.. There is little doubt that dozer lines adversely impacted significant, previously unrecorded, as well as known, cultural resources.

C-1a(1) <u>Cultural resource inventory of linear suppression and rehabilitations projects: bulldozer lines, roads and fences.</u>

Suppression and rehabilitation efforts of linear projects at thirteen fires during August, 2001 have damaged or may result in damage to cultural resources. Linear projects include bulldozer lines, road maintenance activities and new fence construction. Several hundred miles of linear projects exist within or are planned for the thirteen fires. Although the projects are dissimilar, the cultural resource inventory effort for each is similar and disparate projects may be put together in one contract. Thus, for the purposes of this plan they are treated together.

Construction of dozer lines, safety zones, staging areas, and helispots have potentially damaged many cultural resources. Secondary impacts to cultural resources from the construction of bulldozer lines may result because these lines have opened areas to the public that were previously not accessible by road.

Many roads were damaged during fire suppression through repeated use by heavy vehicles or widening of the roads so they could serve as fire lines. The original fire fighting activities may have impacted cultural resources. Planned post-fire road maintenance and rehabilitation could add to the damage. Cultural resources inventories are needed to assess the impacts and to prevent new impacts.

Existing fences burned in many of the fires. They may be rehabilitated, along with the construction of new fences to protect seedings or burn areas. These fences will be inventoried for cultural resources and rerouted as necessary to avoid eligible sites.

This specification focuses on the inventory of disturbed areas or areas which will be

disturbed, and the evaluation of cultural resources or properties for eligibility to the NRHP. All dozer lines, damaged roads, and proposed new fences will receive survey coverage. Actual field experience may require modification of this assumption. Management recommendations will be developed for eligible sites or properties in a manner responsive to the damage and the information potential of the sites.

Further Cultural Resource Inventory for Linear Rehabilitation Projects, C-1a (1)

Fire	Total Acres Burned	Linear Project Acres	Linear Inventory Cost ($)
Tabor Cr	7004	108	2160
Stag	19578	320	6400
MM 367	578	61	1220
N. Delano	8824	90	1800
Rodeo Cr	5529	185	3700
Sheep	83670	450	9000
Buffalo	21188	405	8100
Hot Lake	70910	1142	22840
Dunphy	9722	0	0
Coyote	11675	0	0
Bailey	1201	152	3040
Dee Gold	316	72.8	1456
Ranch	18966	425	8500
TOTALS:	259161	3410.8	68216

Notes: Intensive/Class III Inventory cost = inventory acres * $20/acre.

C-1a(2) <u>Documentation, Evaluation & Stabilization of the California Trail Wellsite</u>.

A stone-lined well was discovered adjacent to the California National Historic Trail at the south end of the Sheep Fire. Most of the historic artifacts are much younger than the California Trail (ca. 1840-60s), but the well may date to the Trail period. The Fire burned the vegetation around the well and loosened the soil. The exposed well was an object of curiosity during and after the fire to firefighters, and they further destabilized the interior rock wall. The well site should be further documented and evaluated for its association with the Emigrant or California Trail. The well should also be stabilized, and protected from further damage during fire rehabilitation.

C-1a(3) <u>Archaeological Site Evaluation and Documentation</u>.

Several significant sites, eligible for the NRHP, were exposed and damaged by the Fires and fire suppression. Other more poorly documented sites were also damaged, but their eligibility remains uncertain. These sites need to be revisited, further documented, and what ever damage has occurred to them need to be assessed or evaluated.

Further Evaluation, Assessment and Documentation at Cultural Resources Damaged During the August 2001 Fires and Fire Suppression.

Fire	Damaged Sites for Evaluation, Assessment & Documentation	COST ($)
Tabor Cr	Railroad car & siding	1000
Stag	two abandoned cabins; Aspen carvings–see C2a.	2000
MM 367	Lithic scatters on ridge.	1000
N. Delano	2 Lithic scatters	1000
Rodeo Cr	Cave site	1000
Sheep	Dozer-damaged dune site & historic well–see C1a(2).	2000
Buffalo	7 Lithic scatters; Midas Mining site	5000
Hot Lake	Tosawihi Quarries & TCP	2000
Dunphy	None	0
Coyote	Aspen carvings & Lithic scatter	1000
Bailey	None	0
Dee Gold	2 large lithic scatters	1000
Ranch	None	0
TOTALS:	---	17000

Notes: Costs based on time & travel to visit sites and prepare damage assessment and update IMACS site forms.

C-1a(4) <u>Cultural resource inventories in advance of seeding site preparation.</u>

Almost 20,000 acres of the August 2001 Fires have been identified for seeding with

rangeland drills. Areas designated for drill-seeding will be inventoried for potential cultural resources and those sites will be avoided during and after seeding as specified in Appendix F, Section J (pp. 42-43) of the State Protocol Agreement (PA) between the BLM Nevada and the Nevada SHPO.

Inventory standards will vary depending on the type of planned treatment and cultural resource sensitivity. The following are minimal standards stipulated by the PA.

Fire rehabilitation activities that involve mechanized surface disturbance of <10 cm depth would generally have survey/inventory transect spacing of 100 m. More intense inventory will be used for areas with higher densities or sensitivity of cultural resources. If surface disturbance is >10 cm, then 30 m transect intervals would be used on cultural resources inventories or surveys. The BLM, through informal discussions, can agree to modify the inventory approach for individual rehabilitation undertakings, but most of the drill seedings will be intensively (Class III) inventoried with 30 m transect intervals. According to the PA, surveys using formal sampling (Class II) or wider transect spacing must be redone in the future, prior to any planning or land modifying activity. Sample or wider transect inventories do not count towards the federal mandate to inventory and evaluate all of the cultural resources located upon public lands.

According to the PA, all cultural resources discovered or relocated will be plotted on maps and at a minimum would be recorded on the Nevada IMACS short form. Resources, except those previously determined not eligible by BLM and SHPO, or that have been fully mitigated, would be flagged for avoidance and avoided during rehabilitation activities. Flagging left around cultural resources for as brief a time as possible to minimize the potential for illegal site looting and artifact collecting. Avoided sites or cultural resources would usually be reseeded by hand, and steps might be taken to further disguise and protect their locations.

Further Cultural Resource Inventory Associated with Drill-Seedings and Disking.

Fire	Total Acres Burned	Site Density/ Sensitivity	Inventory Acres	Inventory Cost ($)
Tabor Cr	7004	low	40	800
Stag	19578	low	150	3000
MM 367	578	moderate	0	0
N. Delano	8824	moderate	596	11920
Rodeo Cr	5529	low	492	9840
Sheep	83670	low	4285	85700
Buffalo	21188	high	0	0

Hot Lake	70910	high	0	0
Dunphy	9722	low	0	0
Coyote	11675	low	0	0
Bailey	1201	low	150	3000
DeeGold	316	high	0	0
Ranch	18966	low	6771	89600
TOTALS:	259161	---	12484	203860

Notes: Intensive/Class III Inventory cost = inventory acres * $20/acre.

C-2a Stag Fire Cabins Documentation and Evaluation.

One historic cabin in the Stag Fire is now more accessible and visible to the public. Fire lines were built near it, upgrading an existing road. The site area is also within a helicopter landing spot. The site are now much more vulnerable to vandalism and looting. Archival and oral historical research will be completed to complement and enrich the cultural information about these homesteads. A second cabin, adjacent to the County Road, was also adjacent to the Deeth Stage Road and is shown on the 1881 Government Land Office plat. Corrals burnt and other features may have been affected by either suppression or the fire itself. Again, historic research and site recordation is necessary to offset the loss from fire and suppression. Both historic cabins will be evaluated for National Register eligibility.

B. Management (Non-Specification Related)

Two topics of non-specification related management concerns are important: The immediate post-fire treatment and rehabilitation; and the related opportunities for inventory, evaluation and mitigation of cultural resources, including detailed documentation, oral and archival historical research, and the avoidance and preservation of eligible and fragile cultural properties.

The necessary stabilization, rehabilitation, or treatment required for the preservation of cultural resources affected by the fire complex, which primarily involves the inventory of rehabilitation bulldozer lines and road construction/maintenance, range land seeding and erosion control measures, and new fence construction are by necessity to be completed through post-incident activities using suppression or contracted resources.

Many archaeological sites received direct impacts from bulldozer line construction. At the present, this damage appears to be restricted to the displacement of artifacts, but only a small fraction of the dozer lines has been inspected by BLM archaeologists. Stabilization or treatment recommendations must necessarily await professional evaluation. Following the complete inventory and documentation of all sites damaged by

dozer lines, each site must be evaluated for its eligibility to the NRHP. Following these evaluations, a list must be prepared by Elko BLM archaeologists of all eligible sites adversely effected by dozer line construction. Funds must then be made available for treatment plans and implementation of all mitigative measures determined necessary by Elko BLM archaeologists, in consultation with the Nevada SHPO and appropriate Native American groups or tribes. Thus, the cultural resources section of this BAER Plan will require amending after initial site inventory, documentation and evaluation to cover all treatment plans and in-the-field mitigative measures.

Cultural resources within the fires are located on federal and private lands. They should be inventoried and stabilized if damage occurred during fire suppression, or where they cannot be avoided during rehabilitation. If permission is not granted by the private property owner(s), no cultural resource inventory or stabilization work would be done on a particular parcel of private land.

In addition to the immediate physical effects of the fire, significant post-fire damage to sites will certainly accrue from sheet erosion and gullying resulting from accelerated runoff, particularly due to thunderstorms. The effects of these post-fire impacts will have long-term adverse consequences for many sites, primarily from accelerate erosion, but also from post-fire stabilization activities, including supplemental erosion control, greater access and visibility, and revegetation. In particular, post-suppression rehabilitation through rangeland drill seeding, plow, or chain may potentially affect significant cultural properties or sites. Any rehabilitation work within these areas must be carefully coordinated with the archaeologists assigned to the project. Mitigation options range from complete avoidance to more costly, data recovery, in consultation with SHPO. It has been Elko BLM policy to avoid significant cultural resources found during the inventories for rangeland seed drilling projects, so no additional costs beyond inventory, documentation, and evaluation are expected as a result of these projects.

Inventories will be necessary before the installation of new fences. It is the intent of the Elko BLM to reroute fences around eligible sites rather than request additional funding to cover mitigation costs associated with the placement of new fences through eligible sites. Thus, no additional costs beyond initial documentation and evaluation are expected for new fence construction.

All equipment operations on private and public lands contribute to potential adverse effects which, although perhaps individually minor, will be significant in the long term. All post-fire rehabilitation measures, whether completed through force-account or through contract, must have specific site protective measures applied to the work. As opposed to a fire emergency, these operations are not related to the immediate protection of life and property. As a consequence, inadvertent damage to cultural resources must be prevented. Accordingly, the following non-specification related recommendations are pertinent:

1. Rehabilitation contracting will be guided by specific language in contract

specifications which address the requirement to protect identified cultural resources. The sites must be flagged and locations determined with Global Positioning System (GPS) units. The location map of cultural resources should be included as supplemental provisions of the contract. The contractor and his/her crew must be briefed as to site locations and the requirement to follow specific site treatment recommendations. Archaeological monitors will be in direct contact with the COR and BLM representative to ensure compliance with the cultural resource protection requirements. Contractors and their crews should be warned that it is illegal to collect artifacts or damage sites on federal lands, and that contracts will be terminated and that prosecution may follow any such activities by their personnel.

2. A post-project inspection should be undertaken, and compliance with site protection requirements should be a specific evaluation item in the final inspection and compliance report.

3. A number of sites have been reported on private and public land within the area which may be or have been rehabilitated, or which may have erosion control and other post-fire mitigation projects completed at them. These sites and features should be mapped by GPS and comprehensively evaluated once they have been mapped and recorded.

4. The BLM's Elko Field Office needs to develop a comprehensive, computerized summary of all of the known cultural resources or sites, and survey/inventory projects. This computerized data base should be integrated or linked to the GIS to enable the more rapid location, analysis, and evaluation of the known archaeological sites within the Elko District. At present, archaeologists can only obtain this information by spending substantial amounts of time looking through report and site files. A more readily accessible and more rapidly distributed computerized-data base is needed in order to respond to fires and other natural emergencies in a timely fashion.

Further Cultural Resource Studies Associated with Rehabilitation of the August 2001 Fires: Total Costs for Linear Projects, Site Assessment, and Drill-Seedings.

Fire	Total Acres Burned	Site Density/ Sensitivity	Linear Inventory Costs ($)	Site Asses-ment Costs ($)	Drill-Seeding Inventory Costs ($)	TOTAL COSTS ($)
Tabor Cr	7004	low	2160	1000	800	3960
Stag	19578	low	6400	2000	3000	9600
MM 367	578	moderate	0	1000	0	1000

N. Delano	8824	moderate	1800	1000	11920	14720
Rodeo Cr	5529	low	3700	1000	9840	14540
Sheep	83670	low	9000	2000	85700	96700
Buffalo	21188	high	8100	5000	0	13100
Hot Lake	70910	high	22840	2000	0	0
Dunphy	9722	low	0	0	0	0
Coyote	11675	low	0	1000	0	1000
Bailey	1201	low	3040	0	3000	6040
Dee Gold	316	high	1456	1000	0	2456
Ranch	18966	low	8500	0	89600	91760
TOTALS:	259161	---	66996	17000	203860	254876

Notes: Uses figures derived from previous tables.

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